

Review of: "Use of the experimental designs as an approach to optimize the inhibition efficiency of a Pyridazine derivative against corrosion of steel in an acidic medium"

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In this work, authors introduced a practical method to evaluate the corrosion inhibition effect of pyridazine derivative for mild steel in the acidic medium. The proposed models own the merit in the future anticorrosive studies. I think it can be published after concerning the major points as follows.

--- A more wide background for corrosion inhibitors should placed in the Introduction section (e.g., *Sustain. Chem. Pharm.*, 2022, 29: 100821; *Mater. Lett.* 2023, 337: 133979; ...)

--- For the preparation of CDM, only one reaction direction is enough. It is unnecessary for authors to display the side-reaction.

--- How is the acquiring way for the coefficients of multiple linear regression model. Authors should make a clear definition.

--- I am confused that the values of IE shown in Table 4. Are those data from gravimetric tests? Please give a more explicit indication.